SERVICE MANUAL

FOR

FRESH-O-MATIC ® #4000

Lincoln

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LIMITED WARRANTY

Lincoln Foodservice Products, Inc., warrants to the original purchaser for the use of each new Fresh-O-Matic 4000 manufactured by Lincoln Foodservice Products, Inc as follows; any original part which proves to be defective in material or workmanship within the warranty period will, subject to the terms of this warranty, be repaired, or replaced with a new or remanufactured part, whichever Lincoln Foodservice Products, Inc. elects, free of charge, provided that in the event of any such defects, the Fresh-O-Matic shall be returned within the warranty period to the nearest Authorized Service Agency, transportation prepaid. If found to contain defective original parts within the limits of this warranty, such parts will be replaced as provided in this warranty and the Fresh-O-Matic will be returned, transportation prepaid. The warranty period shall be a period of one year from the date of original purchase for use or shall be limited to the fifteen month period from the date of manufacture.

This warranty applies only to original parts, and only where the Fresh-O-Matic has been subject to normal and proper use INCLUDING THE USE OF DISTILLED WATER. This warranty does not apply if the Fresh-O-Matic is transported outside of the United States or if the Fresh-O-Matic or any part thereof is subjected to accident, casualty, misuse or abuse of is the date of manufacture is altered or removed. The obligation of Lincoln Foodservice Products, Inc. is limited to the repair or replacement of defective original parts and except as expressly stated herein LINCOLN FOODSERVICE PRODUCTS, INC. MAKES NO GUARANTEE OR WARRANTY, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION WARRANTIES OF FITNESS OR MERCHANTABILITY wit respect to Fresh-O-Matic or parts thereof and Lincoln Foodservice Products, Inc. has no other liability with respect thereto including without limitation liability for indirect, special, consequential, or resultant damages

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GENERAL INFORMATION

FRESH-O-MATIC 4000-4 PURPOSE AND PRINCIPLE OF OPERATION

Used to reheat and freshen rolls or baked goods, reheat pre-cooked meats, vegetables and whole meal dishes. Principle of operation is simple. A water tank stores distilled water, the pump forces distilled water into a heater plate assembly producing super heated steam. Steam enters the food chamber thru 32 vent holes producing a steam environment providing freshening and heating.

WARRANTY DETERMINATION

SEE LIMITED WARRANTY page 2.

1. Warranty period is one year from date of original purchase or is limited to 15 months from the date of manufacture.
2. Have vent holes in the food tray casting been kept clean?
3. Inquire as to what type of distilled water is being used.
   A negative answer to 1,2, or 3 is justification for voiding warranty. Customer must be advised and repair/cost determination made before proceeding with repair. If the unit qualifies for in-warranty repairs, proceed with standard in-warranty procedure.

TECHNICIAL SPECIFICATIONS

1. 120 VAC, 50/60 HZ, Single Ø, 1500 watts, 12.5 AMPS.
2. Thermostat setting 360º F or 182º C (as measured at a point on top of the food tray 2 5/8" from right side and right front)

Red pilot light indicates thermostat operation (off indicates unit up to temperature).

OPERATION SPECIFICATIONS

1. Preheat time approximately 15 minutes or until red light goes out.

Unit will operate satisfactorily with voltage supply of 120 ± 10% VAC.

   a. Higher voltages may reduce heater plate life.
   b. Lower voltages decrease efficiency resulting in slower operating times.

2. Water injected per pump stroke is approximately 10 cc.(1/3 oz.)
3. Outlets must be grounded.
4. DISTILLED WATER MUST BE USED.

DIMENSIONAL SPECIFICATIONS

1. Water tank capacity approximately 160 oz., 5 qt., 4.8 liter.
2. Overall dimensions 11 1/2 " high x 15 5/8" wide x 15 7/8" deep.
3. Overall height with cover open 23"
4. Cord length 5 1/2 ft.
5. Carton size 18 3/4" x 18 3/4" x 17".
6. Cube approximately 3 1/2 cu. ft.
7. Gross shipping weight 39 lbs – Net weight 35 lbs.

SERVICE CHECK OUT STARTUP

1. Fill water tank with approximately 1 qt. DISTILLED WATER.
2. Plug unit into 120 VAC grounded outlet and turn on switch.
3. Wait approximately 15 minutes for preheat or until red light goes out.
4. Push pump handle.
5. If the steam is not proper, see Service notes on page 10.

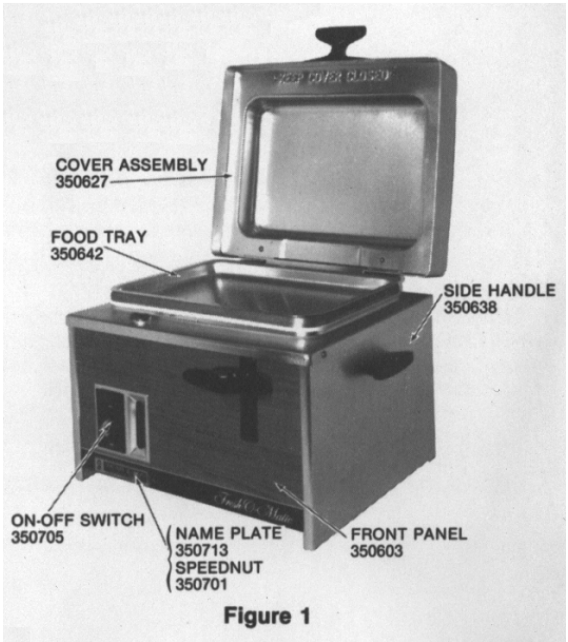


Figure 1

ELECTRICAL SERVICE PROCEDURES

USE EXTREME CAUTION WHEN SERVICING LIVE APPLIANCES. BE SURE APPLIANCE IS PROPERLY GROUNDED.

ON-OFF SWITCH #350705 FIGURES 1&2.

1. Switch on provides power to heater plate thru thermostat. If switch is on and no heat from heater plate, check switch, thermostat, thermal cut off, and heater plate for continuity.

PILOT LIGHT #350605 FIGURES 1&2

1. Lights when switch is first turned on, then cycles with thermostat. If light does not light, check continuity of pilot light, switch and thermostat.

THERMOSTAT #350620 FIGURE 2.

1. Thermostat should remain closed until a temperature of 360° F (182° C) is attained on the heater plate. Temperature is measured on the top of food tray #350642, (Figure 1), at a point 2 5/8" from front and right edges.

HEATER PLATE #350727 Figure 3.

1. Heater plate draws approximately 12.5 amps.
2. If heating is not evident, a continuity check should be made at heater terminals.
3. If heater plate is not defective approximately 9 ½ ohms should be measured. If approximately 9 ½ ohms is not measured or if heater plate is open or shorted, replace element.

THERMAL CUTOFF WIRE HARNESS #350703 (FIGURE 2).

1. This harness contains a thermo link to protect unit from overheating if thermostat would fail in closed position. The thermo link will open when the ambient temperature inside cabinet reaches approximately 468° F (242°C). It will be necessary to replace entire wire harness assembly. Do not jumper the thermal cut off except for test as this will be in violation of UL, CSA, and warranty. For lead determination refer to schematic (Page 12).

POWER CORD #350725 FIGURE 2.

1. This cord is equipped with a 120 VAC grounded plug.
2. The lead determination for connection within unit are shown on the schematic (Page 12)

WIRE HARNESS #350704 FIGURE # 2.

1. This harness connects switch & thermostat.

TO REMOVE FRONT PANEL # 350603 FIGURE 2

1. Remove cover assembly #350627 by removing hinge pin #350545 (Figure 3),or by compressing spring loaded pins in hinges(new style).
2. Lay on back and remove 2 screws #350531 on bottom front (figure 4) and slide out panel.

TO REMOVE HEATER PLATE ASSEMBLY #350729 (FIGURES 3&7)

1. Remove front panel as above.
2. Remove electrical leads from heater plate (Figure 2).
3. Loosen nuts from water tube and remove (Figure 9),remove screw from filler tube stop and loosen filler tube nut.
4. Loosen hinge screws #350543 (Removal not necessary). (Unit upright),not needed for new style hinges.
5. Remove shelf screws #350636 (Figure 3).
6. Remove hex nuts (4) #350574 from support studs (bottom of unit figure 3). (Unit on back).
7. Lift heater plate assembly up enough to loosen thermostat bulb clamp #350621 and remove thermostat bulb.
8. Heater plate assembly may now be lifted up and out. (unit upright).

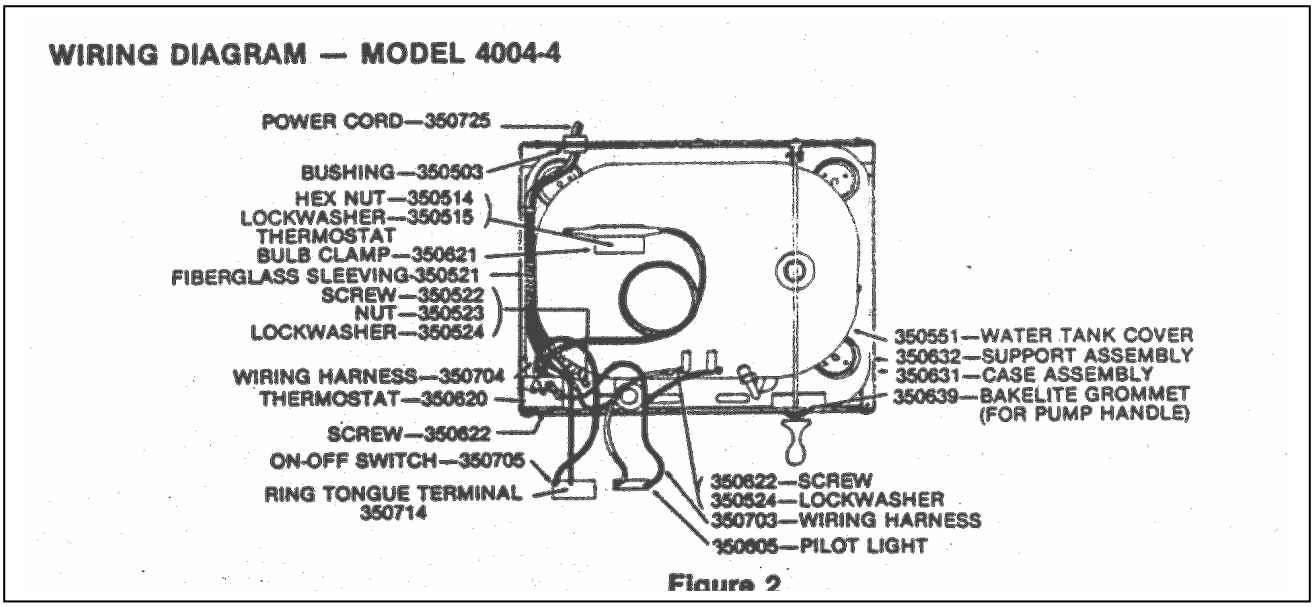


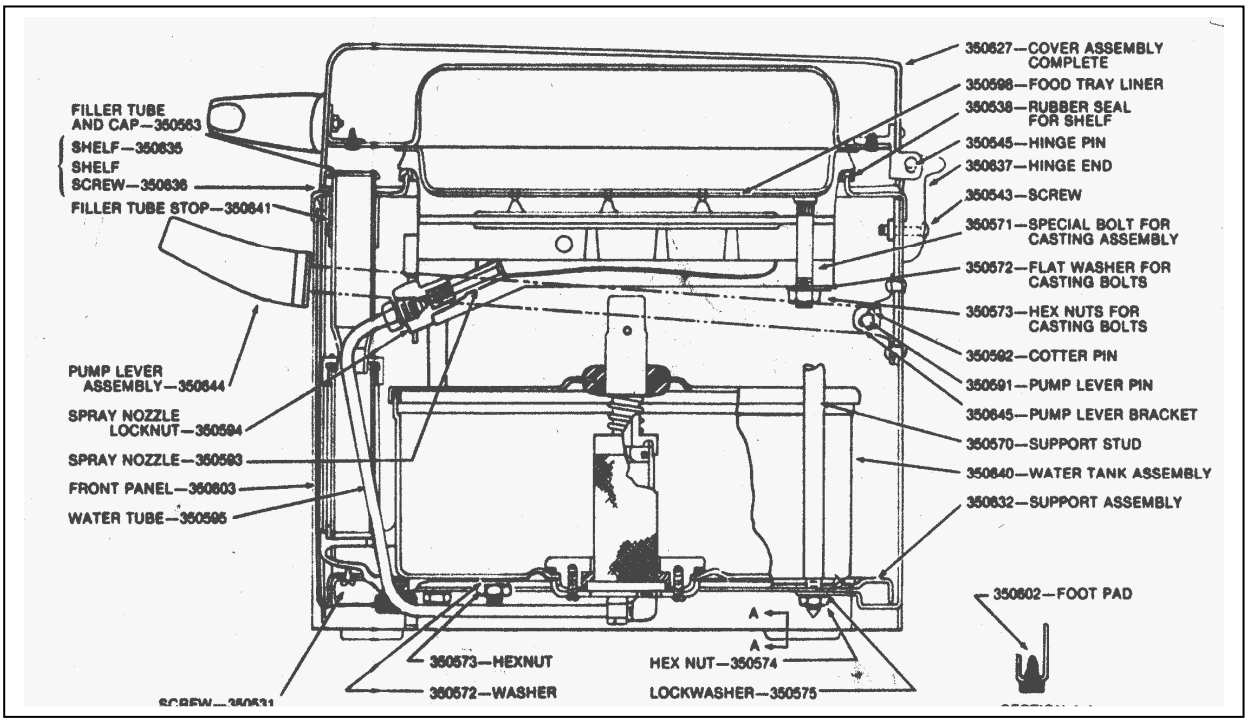
Figure 2

TO REMOVE SPRAY NOZZLE #350593 (FIGURE 3).

1. Remove front panel as indicated on page 4.
2. Remove spray nozzle locknut #350594 and then with pliers remove nozzle #350593.

TO CLEAN SPRAY NOZZLE #350593 (FIGURE 3).

The spray nozzle may be cleaned and serviced from the front of the unit by removing front panel. Loosen water tube nut #350597, remove spray nozzle locknut #350594 and remove spray nozzle #350593. It may be necessary to use pliers to remove spray nozzle. If difficulty is experienced removing spray nozzle locknut, heat the plate around the nut with a torch.



TO REPLACE HEATER PLATE ASSEMBLY #350729 (FIGURE 3).

1. If necessary replace rubber shelf seal #350538.
2. Place heater plate assembly into shelf #350635 with element terminals facing the filler tube hole.
3. Replace support studs #350570 into heater plate assembly (apply RTV to threads of stud) and tighten.
4. Place heater plate assembly and shelf on top of unit and slide thermostat bulb under clamp and tighten.
5. Insert heater plate assembly into top opening (element terminals facing front) and insert 4 support studs into holes on bottom of unit. Align filler tube and tighten filler tube nut and replace filler tube stop screw.
6. Tighten hinge screws and replace shelf screws.
7. Replace washers and nuts on support studs, replace wires to heater terminals and replace water tube.

TO REMOVE WATER PUMP (FIGURE 5).

1. Remove front panel and water tube.
2. Remove four screws #350586 from water pump cap #350585.
3. Pump can now be pulled out of the bottom of the unit.
4. Install in reverse order, Be sure to engage the pump with the pump lever.

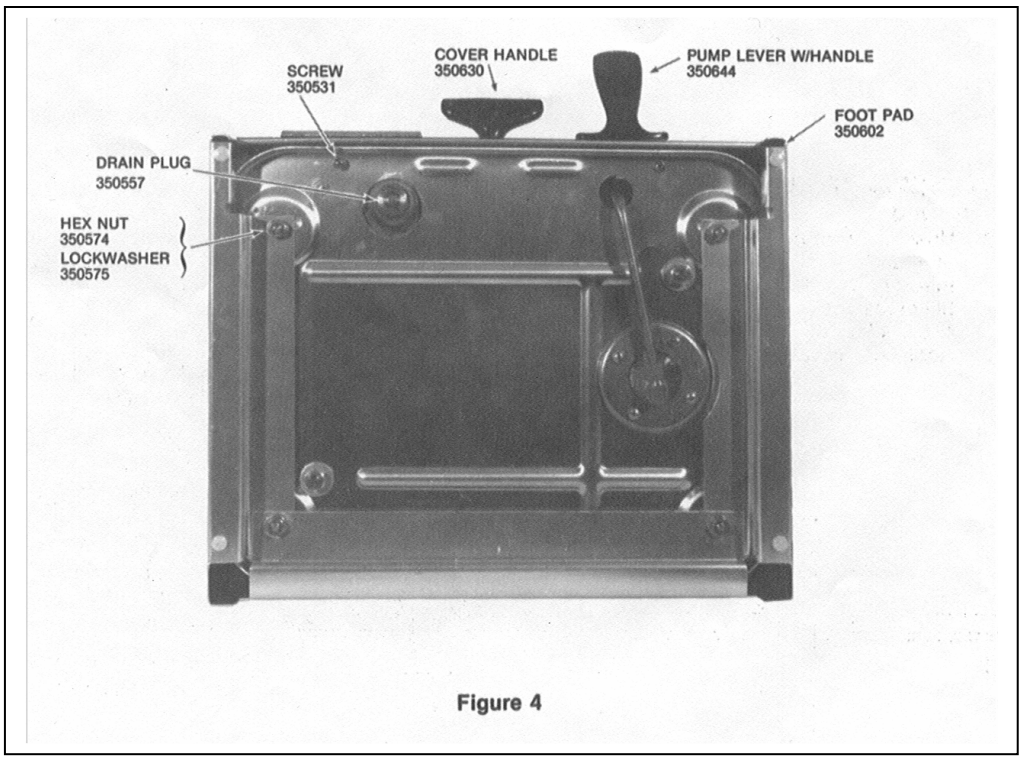


Figure 4

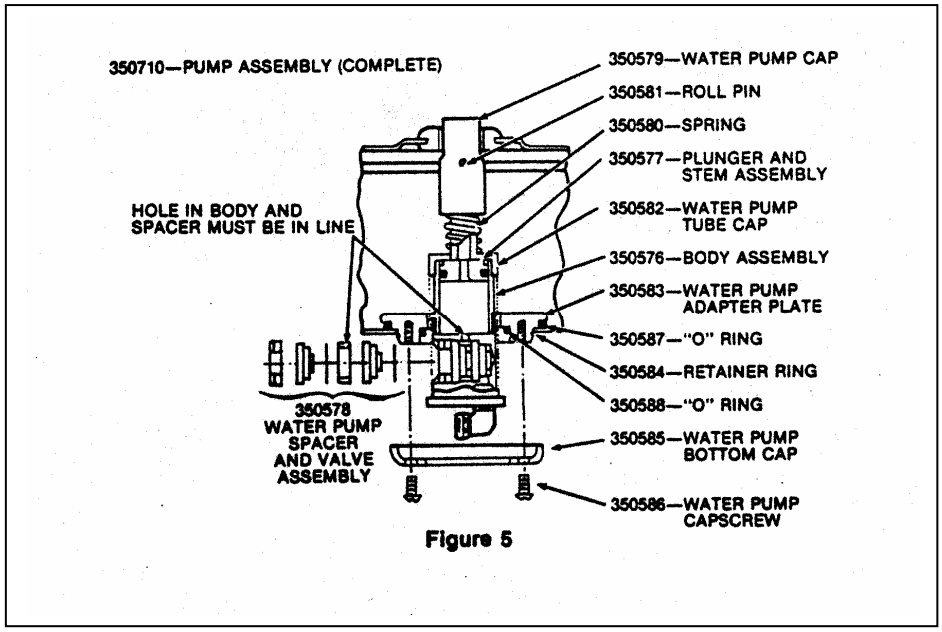


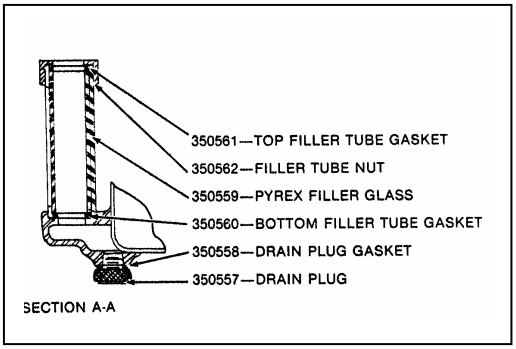
Figure 5

TO REPLACE FILLER GLASS #350599 FIGURE 6.

1.Unscrew filler tube nut #350562 and remove all glass.

2.Insert new glass being sure top and bottom filler tube gaskets #350561 & 350560 are good and sealing properly.

3. Replace filler tube nut.



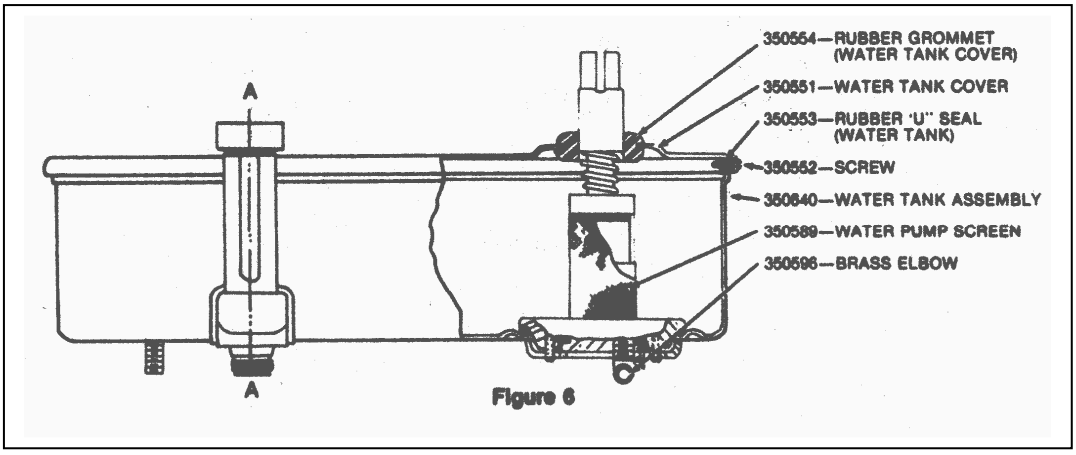


Figure 6

NOTICE: We do not, under in-warranty repair of the #4000 fresh-o-matic, honor the complete replacement of a heater plate assembly. Normally many of these parts are salvageable.

HEATER PLATE ASSEMBLY INSTRUCTIONS FIGURES 7 & 8.

ALL SURFACES MUST BE CLEAN, DRY AND BONDED TOGETHER WITH RTV #350716 PER FOLLOWING INSTRUCTIONS. ALWAYS REPLACE ALL STUDS.

1. Remove studs from food tray casting #350642 by knocking out from bottom and reinsert new studs#350571. (Be sure top of stud is flush with the top surface of the food tray casting).
2. Place food tray casting #350642 on work table with studs up.
3. Insert 4 steel balls #350568 in proper holes.
4. Place baffle plate #350566, chamfered holes down, across studs of food tray casting. Apply a 1/16" bead of RTV half-way between holes and edge of plate. Invert baffle plate (now chamfered holes up) and place over studs on food tray casting.
5. Place heater plate #350727 (terminals down) across studs of food tray casting. Apply a 1/16" bead of RTV on flat surface between holes and edge of plate. Be sure there is no RTV in, or close to, the 4 steam grooves. Invert heater plate (terminals up) and place over studs.

Insert spray nozzle #350593 and nozzle locknut #350594. Turn locknut a partial turn, then apply loctite sealant #350648 around threads and complete tightening. Be sure spray nozzle is clean.

6. Place heater cover plate (open nozzle pointing down) over studs and apply 1/16" bead of RTV between holes and edge EXCEPT on the side where the spray nozzle is located. On this side a bead should be applied on the inside between the holes and the inside edge of the flat. Insert screw #350626 as shown (figure 8) and invert heater plate cover, placing over studs. The heater plate terminals and spray nozzle are on the same side. Tap each corner firmly with a rubber mallet to set plates and spread RTV.
7. Place one drop of RTV next to each bolt. Install washers #350572 and nuts #350573 and tighten nuts As follows:

a) The 14 nuts #350573 must be tightened and torqued to 110" lbs. to 125" lbs. max. and torqued in the following sequence.
b) Snug all 14 nuts.
c) Torque center nut on longest side and its opposite.
d) Torque one of center nuts on end and its opposite.
e) Torque both remaining center nuts on side and their opposites.
f) Torque other center nuts on end and its opposite.
g) Torque all 4-corner nuts.
h) Repeat torque procedure once more.

NOTE:
FOOD TRAY, BAFFLE PLATE, HEATER PLATE, AND COVER PLATE TO BE BONDED TOGETHER WITH A THIN 1/16 INCH BEAD OF 350716 RED R.T.V.

#350729 HEATER PLATE ASSEMBLY (COMPLETE)

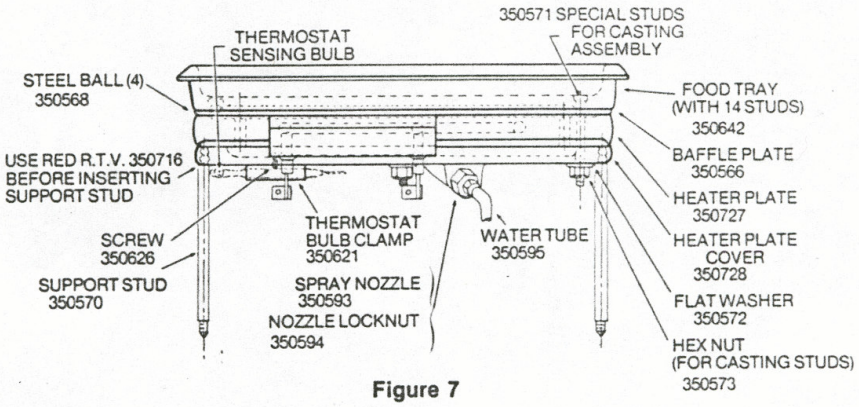

350571 SPECIAL STUDS FOR CASTING ASSEMBLY
THERMOSTAT SENSING BULB
STEEL BALL (4) 350568
FOOD TRAY (WITH 14 STUDS) 350642
BAFFLE PLATE 350566
HEATER PLATE 350727
HEATER PLATE COVER 350728
FLAT WASHER 350572
HEX NUT (FOR CASTING STUDS) 350573
USE RED R.T.V. 350716 BEFORE INSERTING SUPPORT STUD
SCREW 350626
SUPPORT STUD 350570
THERMOSTAT BULB CLAMP 350621
SPRAY NOZZLE 350593
NOZZLE LOCKNUT 350594
WATER TUBE 350595

Figure 7

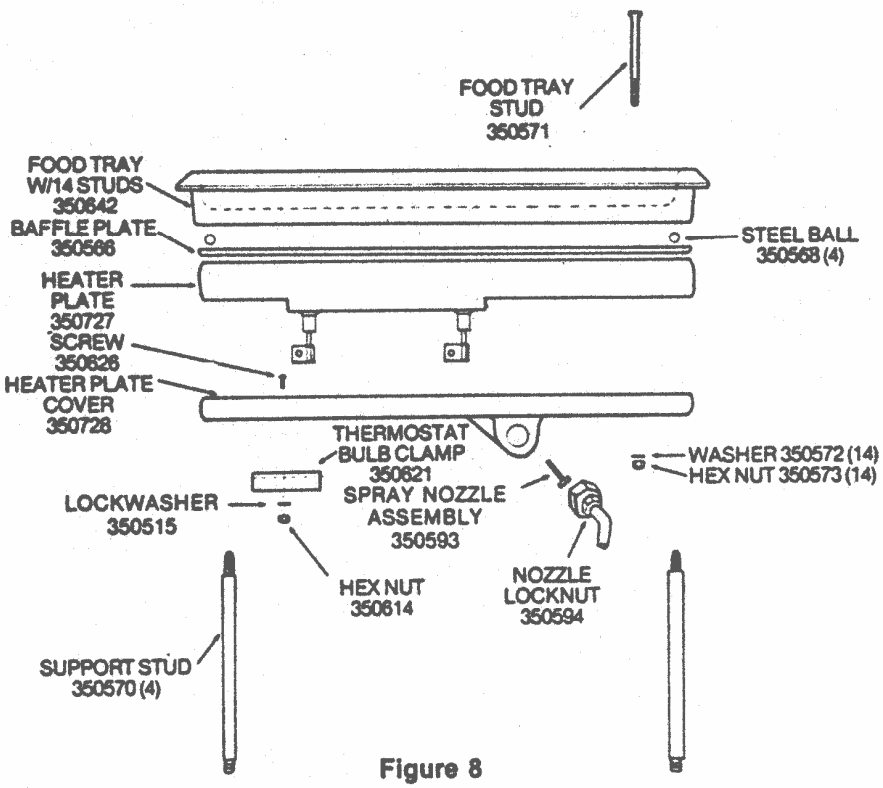


Figure 8

SERVICE NOTES

In some cases on a repaired unit the water, when pumped into the unit, does not immediately turn into dry super heated steam but comes out very moist.

First check if unit is at proper temperature. Depress pump handle injecting water into unit. If you hear a steady frying sound (like water sizzling when dropped into a hot skillet) lasting as much as 15 seconds or longer, boil out unit as follows.

1. Pump water into unit until water rises and covers the food tray approximately ¼" deep.
2. Place cloth over top of food tray for your protection or close lid until unit is done steaming.
3. Let unit operate until all water has steamed away.

This will assist in boiling away any film on heater plate allowing proper operation of unit. A heater plate operating properly will produce a hiss as steam is forced thru the plates lasting about 5 seconds.

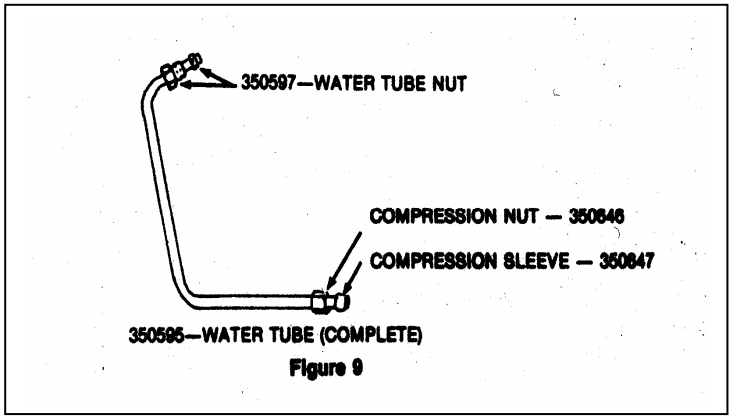


Figure 9

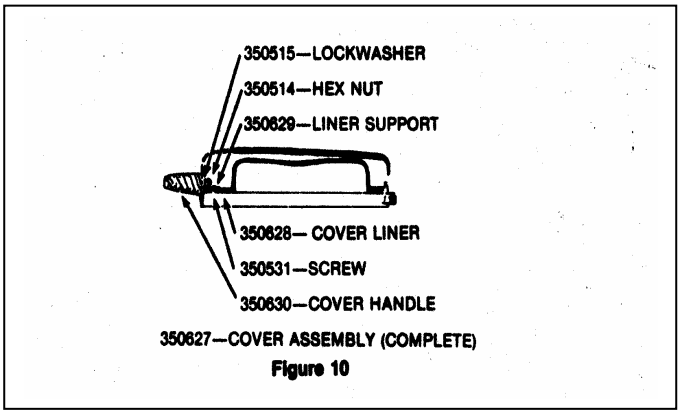
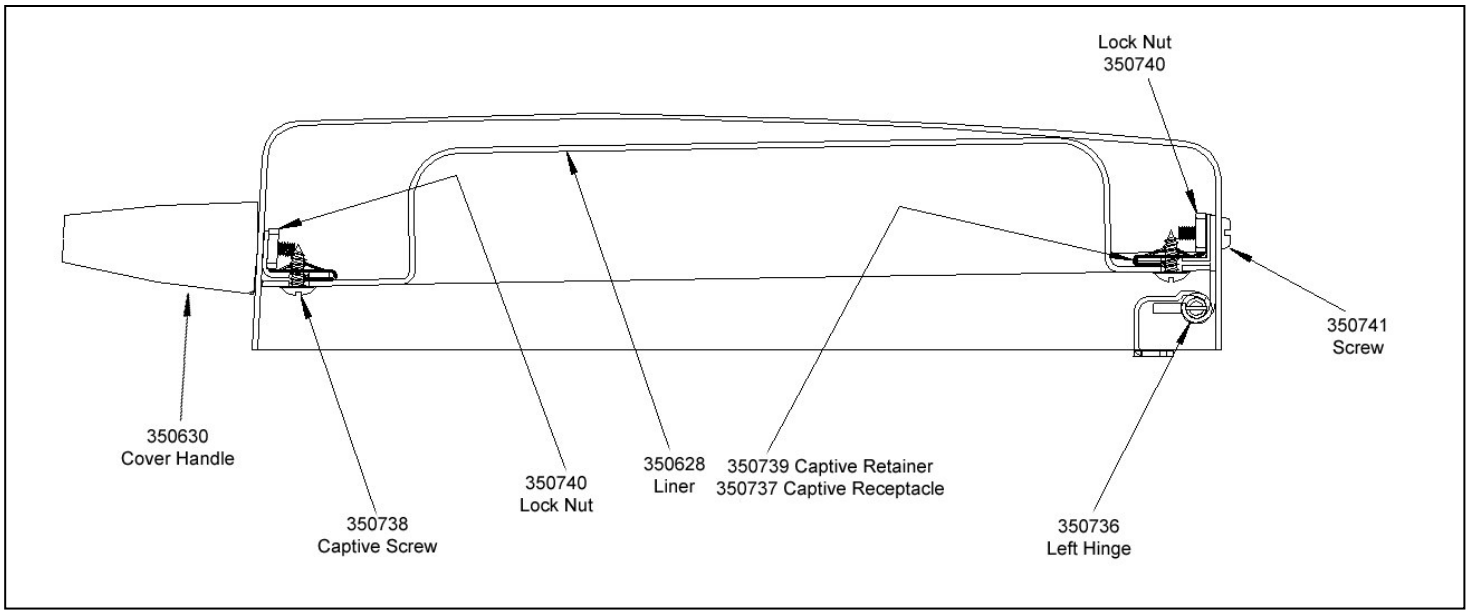


Figure 10



Part No	Description	Qty	Fig	Part No	Description	Qty	Fig
350503	Strain Relief Bushing	1	2	350602	Foot pad	4	3,4
350514	Hex Nut SS 8-32	3	2,10	350603	Front Panel	1	1,3
350515	Lockwasher ss	8	2,8, 10	350605	Pilot Light 125 volt red	1	2
350521	Fiberglass Sleeving	1	2	350620	Thermostat	1	2
350522	ScrewRHM ZN 6-32x3/8	1	2	350621	Thermostat bulb clamp	1	2,7,8
350523	Hex nut ST 6-32	1	2	350622	Screw RHMSS 6-32x3/16	4	2
350524	Lockwasher ZN #6	3	2	350626	Screw RHMSS 8-32x1/2	1	7,8
350531	Screw RHTSS #8x3/8	8	4	350627	Cover Assy. Complete	1	1,3,10
350538	Shelf Seal	1	3	350628	Cover Liner	1	10
350543	Screw PHMNI 8-32x7/8	4	3	350629	Liner Support	1	10
350545	Hinge Pin	1	3	350630	Cover Handle	1	4,10
350547	Screw PHMSS 8-32x3/8	4		350631	Case Assembly	1	2,3
350551	Water Tank Cover	1	2,6	350632	Support Assembly	1	2,3
350552	Screw RHTSS #4x3/8	2	6	350635	Shelf	1	3
350553	Water Tank Seal	1	6	350636	Shelf Screw #6x1/4	3	3
350554	Rubber Grommet	1	6	350637	Hinge End	2	3
350555	Washer, Flat ZN 5/16	2	3	350638	Side Handle	2	1
350557	Drain Plug	1	4,6	350639	Bakelite Grommet	1	2
350558	Plug Gasket	1	6	350640	Tank Assembly	1	3,6
350559	Filler Tube Glass	1	6	350641	Filler Tube Stop	1	4
350560	Fillerube Gasket, BTM.			350642	Food Tray W/14 Studs	1	1,7,8
350561	Filler Tube Gasket, Top	1	2,6	350644	Pump Lever w/Handle	1	3,4
350562	Filler Tube Nut	1	6	350645	Pump Lever Bracket	1	3
350563	Filler Tube & Cap	1	3	350646	Compression Nut BR	1	9
350566	Baffle Plate	1	7,8	350647	Compression Sleeve ¼"	1	9
350568	Stainless Steel Ball	4	7,8	350701	Speed Nut ¼" Stud	2	1
350570	Support Stud	4	3,7,8	350703	Wiring Harness wlThermal Cut-Off	1	2
350571	Food Tray Studs	14	3,7,8	350704	Wiring Harness	1	2
350572	Flat Washer AL5/16-18	16	3,7,8	350705	On-off switch	1	1,2
350573	Hex Nut AL 5/16-18	16	3,7,8	350710	Pump Assembly	1	5
350574	Hex Nut SS ¼-20	4	3,4	350713	Nameplate	1	1
350575	Lockwasher SS IN ¼	4	3,4	350714	Ring Tongue Terminal	4	2
350576	Pump Body Assembly	1	5	350725	Power Cord	1	2
350577	PumpPlunger&Stem Assy	1	5	350728	Heater plate cover	1	7,8
350578	Pumpspacer&valve Assy	1	5	350729	Heater plate assy complete	1	7
350579	Pump cap	1	5	350730	NS Heater plate 240v		
350580	Pump spring	1	5	350732	NS Heater plate assy 240v		
350581	Roll pin	1	5				
350582	Pump tube cap	1	5	NOT	SHOWN !		
350583	Pump adapter plate	1	5	350734	Pin vise bit FOM	5	
350584	Pump retainer ring	1	5	350735	Cover assy NS (BLACK)	1	
350585	Pump bottom cap	1	5	350736	Hinge,Q.D. leaf FOM	2	
350586	Pump cap screw	4	5	350737	Receptacle,captive,FOM	4	
350587	"O" Ring	1	5	350738	Screw,captive,FOM	4	
350588	"O" Ring	1	5	350739	Retainer,captive,FOM	4	
350589	Pump screen	1	6				
350591	Pump lever pin	1	3				
350592	Cotter pin 1/16x1/2	1	3				
350593	Spray nozzle assy.	1	3,7,8	350731	Sealant RTV 3140 Clear		
350594	Spray nozzle locknut	1	3,7,8	350599	Compound #111		
350595	Water tube assembly	1	3,7,8		Dow corning		
350596	Brass elbow ¼" OD	1	6	350648	Loctite sealant		
350597	Water tube nut BR ¼"	1	3		592-31/50cc		
350598	Food tray liner	1	3	350716	RTV Sealant #106		

WIRING SCHEMATIC MODEL 4000-4